

2004

FEBRUARY 17-19
CONRAD JUPITERS
CONVENTION CENTRE
GOLD COAST, QUEENSLAND
AUSTRALIA

IEA Asia Pacific Conference on

Zero Emissions Technologies

Fossil Fuels for Sustainable Development

In conjunction with the APEC Workshop on Near-Term Options to Reduce CO₂ Emissions from the Electric Power Generation Sector Monday February 16

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US DEPARTMENT
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Department of Trade and Industry



The conference is being organised by the IEA Working Party for Fossil Fuels with support from the UN, IEA member countries, Australian and Queensland Governments and US Department of Energy



Welcome

Welcome to the forthcoming IEA Zero Emissions Technologies Conference to be held at the Jupiters Convention Centre on the Queensland Gold Coast February 17-19 2004.

Energy demand and greenhouse gas emissions are growing strongly across the globe. We are sure you will agree there is an urgent need to bring to the wider public a simple and clear conceptual explanation of the potential for zero emission technologies for fossil fuels, and to explore the issues in the development and wide deployment of these technologies.

We have an exciting agenda for this conference, with a wide range of speakers and leaders in their respective fields from around the world gathering for this important event.

We look forward to your company in February 2004.

Yours sincerely

Barbara McKee

DIRECTOR, OFFICE OF COAL & POWER IMPORT AND EXPORT
US DEPARTMENT OF ENERGY
CO-CHAIR, IEA WORKING PARTY ON FOSSIL FUELS
AND
CO-CHAIR, IEA ZERO EMISSIONS TECHNOLOGIES CONFERENCE

Andy Lloyd

MINING EXECUTIVE RIO TINTO LTD
AND
CO-CHAIR, IEA ZERO EMISSIONS TECHNOLOGIES CONFERENCE

Background

The IEA, through its Working Party on Fossil Fuels, has started a major new initiative to facilitate international collaboration and cooperation on the development and deployment of zero emissions technologies (ZETs).

Contributors to this event will come from a wide range of sectors including government, environmental and other non-government organisations, and will explore the viability, development and deployment of ZETs and their potential to meet the diverse needs of the economies in the Asia Pacific region.

The objectives of the conference are to:

- ☐ provide high quality information to global, regional and local communities on the potential for the development and deployment of zero emissions technologies for fossil fuels as part of a future portfolio of cleaner energy options;
- ☐ explain ZETs for fossil fuels and their potential to new audiences;
- ☐ address the global potential of ZETs for fossil fuels and its application in the Asia Pacific region;
- ☐ address the use of coal and natural gas and their emissions;
- ☐ assess the potential for sequestration of CO₂ in the Asia-Pacific region;
- ☐ create a wider awareness of the research and development already underway and that which will be needed to lead to the availability of advanced fossil energy systems for clean generation of electricity and production of fuels, and the capture and storage of carbon dioxide; and
- ☐ explore possible pathways to development and deployment of ZETs in developing and developed economies.

Who should attend

This conference is designed to bring together technical and non-technical people from a wide variety of backgrounds, and will include the environmental and scientific disciplines, industry and community representatives.

Delegates will be drawn from around the world, and particularly from the Asia Pacific region.

They will come from backgrounds including:

- ☐ industry and manufacturing, especially energy producers and equipment manufacturing companies;
- ☐ electricity generators;
- ☐ governments;
- ☐ multilateral and private financial institutes;
- ☐ the research community; and
- ☐ non-government and community organisations.



Monday, February 16

Asia-Pacific Economic Cooperation (APEC) Workshop on Near-Term Options to reduce CO₂ Emissions from the Electrical Power Generation Sector in APEC Economies

The APEC Expert Group on Clean Fossil Energy (EGCFE) is completing a multiyear study on technological and other options to reduce future carbon dioxide (CO₂) emissions from electric power generation facilities in APEC economies.

This APEC technical workshop will focus on the results of the study, exploring technical options that can be used to reduce emissions significantly prior to the widespread availability of the zero emissions technologies discussed in the IEA Technical Workshop and Conference that follows.

The workshop is targeted at experts, senior government officials, executives from the power industry of both developed and developing economies, and technology suppliers. It will be of particular benefit to APEC developing economies where most options can not only reduce CO₂ emissions, but also lower electricity costs and reduce other emissions (SO₂, NO_x, and particulates) of local and regional concern.

Topics to be covered include:

- ☐ upgrading and refurbishment of existing power plants;
- ☐ fuel switching for emission reduction;
- ☐ new commercial generating technologies (supercritical and ultra-supercritical pulverized coal, integrated gasification combined cycle, gas turbines, fuel cells, etc) including their market penetration, economics, reliability, O&M, and other related issues;
- ☐ emission accounting and trading schemes, and development cooperation;
- ☐ facilitating trade and investment in APEC developing economies in this area; and
- ☐ how to pick the 'low-hanging fruit' for APEC economies.



Tuesday, February 17

IEA ZETs Technical Workshop

PURPOSE

The Workshop will bring together international technical experts on zero emissions technologies for fossil fuels and technical experts from the Asia-Pacific region.

The purpose is to:

- ☐ identify the technological barriers to the development and deployment of zero emission technologies;
- ☐ identify regional differences in technological barriers; and
- ☐ agree on global and regional priorities in technology relating to zero emissions technologies.

FORMAT

After a context setting Workshop plenary session, experts will form four working groups to focus on technological areas. Each of the working groups will prepare a brief written report and the Chairs will present their findings to the closing plenary session of the Workshop. The conclusions from the Workshop will be reported on Day One of the IEA ZETs Conference.

WORKING GROUPS

The four working groups will be:

1. Coal gasification.
2. Carbon dioxide capture from coal gasification, natural gas, oxygen-fired pulverised fuel coal technology and from conventional pulverised coal technology.
3. Transport and geological storage of captured carbon dioxide from all sources.
4. Hydrogen turbines, the use of fossil fuel derived hydrogen in fuel cells and the production of liquid fuels from fossil fuels in conjunction with carbon dioxide capture and storage.

Selected technology experts will support each working group chairman. Each working group will commence with a technical presentation that surveys the technology field being considered, lists the important issues and proposes a list of priorities for discussion by the working group members. No other set presentations are envisaged.

OUTCOMES

- ☐ an agreed list of technological priorities;
- ☐ a wider understanding of ZETs; and
- ☐ the identification of differences in regional technological priorities.

**WELCOME RECEPTION Conrad Jupiters Convention Centre
Tuesday February 17, 6.30pm – 8.30pm**

An opportunity to meet your fellow delegates, relax and enjoy light refreshments.

DAY ONE

8.00am

Wednesday, February 18

Coffee and delegate registration

SESSION I

9.00am

OPENING PLENARY: GLOBAL PERSPECTIVES

Session and Conference Co-Chairs:

Andy Lloyd MINING EXECUTIVE, ENERGY SERVICES, RIO TINTO LTD [AND](#)

Barbara McKee DIRECTOR, OFFICE OF COAL AND POWER IMPORT AND EXPORT, US DEPARTMENT OF ENERGY;
AND CHAIR, IEA WORKING PARTY ON FOSSIL FUELS

Welcome and Opening Comments

Barbara McKee DIRECTOR, OFFICE OF COAL AND POWER IMPORT AND EXPORT, US DEPARTMENT OF ENERGY; AND
CHAIR, IEA WORKING PARTY ON FOSSIL FUELS [AND](#)

Andy Lloyd MINING EXECUTIVE, ENERGY SERVICES, RIO TINTO LTD

The Growing Importance of Zero Emissions

The Hon. Ian Macfarlane MP, MINISTER FOR INDUSTRY, TOURISM AND RESOURCES, AUSTRALIA

(SUBJECT TO PARLIAMENTARY COMMITMENTS)

Energy and the Future Role of Fossil Fuels

The Hon. Georg-Wilhelm Adamowitsch VICE MINISTER, FEDERAL MINISTRY OF ECONOMICS AND LABOUR, GERMANY

Making the Case for ZETS including topics such as world energy demand, role of fossil fuels
and the need for zets

Marianne Haug DIRECTOR, ENERGY EFFICIENCY, TECHNOLOGY AND RESEARCH AND DEVELOPMENT, IEA

Challenges to Zero Emissions Technologies including technical and policy issues, constituency
acceptance and economics

The Hon. Carl Michael Smith ASSISTANT SECRETARY FOR FOSSIL ENERGY, US DEPARTMENT OF ENERGY

Asia Pacific Priorities including economic, environmental, social, trade and development issues

Professor Zhu Deren VICE CHAIRMAN, CHINA NATIONAL COAL ASSOCIATION

10.30am

Morning break – Exhibition area

SESSION II

11.00am

TOWARDS THE VISION OF A ZETS FUTURE

Session Chair:

Jostein Dahl Karlsen ADVISOR, OIL AND GAS DEPARTMENT, MINISTRY OF PETROLEUM AND ENERGY, NORWAY;
AND VICE CHAIRMAN, IEA WPFF

The Zero Emissions Vision – a concept within reach

Dr Robin Batterham CHIEF SCIENTIST OF AUSTRALIA

Carbon Capture and Storage Technologies

Dr Peter Cook EXECUTIVE DIRECTOR, AUSTRALIAN CRC FOR GREENHOUSE GAS TECHNOLOGIES

What does the Technology Roadmap mean?

Dr John Topper MANAGING DIRECTOR, IEA CLEAN COAL CENTRE

CSIRO Flagship Program and its Role in Delivering ZETS

Dr John Wright DIRECTOR, CSIRO ENERGY

12.30pm

Stand-up Buffet Lunch – Exhibition area

SESSION III

1.30pm

INNOVATIVE INITIATIVES TOWARD ZERO EMISSIONS TECHNOLOGIES

Session Chair:

Tohmei Takekawa CHIEF REPRESENTATIVE IN JAKARTA AND SYDNEY, NEW ENERGY AND INDUSTRIAL TECHNOLOGY
DEVELOPMENT ORGANIZATION, (NEDO), JAPAN

Future Gen

Representative US DEPARTMENT OF ENERGY

Outcomes from the Coal 21 Programme

Mark O'Neill EXECUTIVE DIRECTOR, AUSTRALIAN COAL ASSOCIATION

The Sleipner Project

Olav Karstad MANAGER, NEW ENERGY STATOIL, MINISTRY OF PETROLEUM AND ENERGY, NORWAY

The Weyburn Project

Kelly Thambimuthu SENIOR RESEARCH SCIENTIST, CANMET, CANADA; AND
CHAIRMAN, IEA GREENHOUSE GAS R&D PROGRAMME

3.00pm

Afternoon break – Exhibition area

SESSION IV

3.30pm

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OVERCOMING OBSTACLES TO MEET THE CHALLENGES

Session Co-Chairs:

Dr Helmut Geipel HEAD OF DIVISION, NEW ENERGY CONVERSION TECHNIQUES,
FEDERAL MINISTRY OF ECONOMICS AND TECHNOLOGY, GERMANY **AND**

Howard Bamsey CHIEF EXECUTIVE, AUSTRALIAN GREENHOUSE OFFICE

Report from the APEC and IEA ZETs Technical Workshops (February 16-17)

Scott Smouse SENIOR MANAGEMENT AND TECHNICAL ADVISOR INTERNATIONAL,
NATIONAL ENERGY TECHNOLOGY LABORATORY, US DEPARTMENT OF ENERGY; AND CHAIR, APEC EWG EXPERT GROUP

Dr John Topper MANAGING DIRECTOR, IEA CLEAN COAL CENTRE

Key Challenges in Moving to ZETs, including perspective of the World Bank and developing economies

Kui Nang 'Peter' Mak CHIEF, ENERGY AND TRANSPORT BRANCH, DEPARTMENT OF ECONOMICS
AND SOCIAL AFFAIRS, UNITED NATIONS

Issues in Investing in Energy Infrastructure in Asia

Rita Nangia DIRECTOR, RSFI DIVISION, ASIAN DEVELOPMENT BANK

Making New Development Sequestration Ready

Jeffrey Price MANAGING PARTNER, BLUEWAVE RESOURCES

5.00pm

Closing Remarks by Conference Co-Chairs

5.10pm

Close of Day One

7.30pm

CONFERENCE DINNER

Join your fellow delegates for a relaxed evening at McLaren's Landing, a private 9 acre island homestead overlooking the water to the western Hinterland mountain ranges. Buses will depart Conrad Jupiters Convention Centre at 6pm for Marina Mirage, connecting with the fast catamaran to the island. Pre-dinner drinks and canapés will be served on board.

DAY TWO

8.30am

Thursday, February 19

Coffee and delegate registration

SESSION V

9.00am

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ZERO EMISSIONS TECHNOLOGIES & SUSTAINABLE DEVELOPMENT

Session Co-Chairs:

Professor Sergio Garribba COMMISSIONER, ITALIAN REGULATORY AUTHORITY FOR ELECTRICITY AND GAS; **AND**
Taufik Sastrawinata DIRECTOR OF TECHNOLOGY AND BUSINESS DEVELOPMENT, PT. ADVANCE TECHNOLOGY INDONESIA,
AGENCY FOR THE ASSESSMENT AND APPLICATION OF TECHNOLOGY, INDONESIA; **AND**
SECRETARY-GENERAL, INDONESIA COAL SOCIETY

The Queensland perspective on Zero Emissions Technologies

Senior Queensland Ministerial representative

ZETs and their Role in Sustainable Development

JoAnne DiSano DIRECTOR, DIVISION OF SUSTAINABLE DEVELOPMENT, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS,
UNITED NATIONS

Asia Pacific Perspectives – the priorities for development in Thailand relating to ZETs for fossil fuels

Governor Anchalee Chavanich INDUSTRIAL ESTATES AUTHORITY OF THAILAND (to be confirmed)

Asia Pacific Perspectives – China's priorities and opportunities for wide collaboration on the development of ZETs

Madam Yu Zhufeng CLEAN COAL ENGINEERING AND RESEARCH CENTRE AND DIRECTOR OF THE US/CHINA CLEAN COAL
TECHNOLOGY CENTRE, PEOPLE'S REPUBLIC OF CHINA

10.30am Morning break – Exhibition area

SESSION VI

11.00am

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RISK, ECONOMICS AND FINANCE: PANEL DISCUSSION

Session Co-Chairs:

Tim Warren CHAIRMAN, SHELL AUSTRALIA

Takahashi Masaki SENIOR POWER ENGINEER, INDUSTRY AND ENERGY DEPARTMENT, WORLD BANK

Addressing risk and reward in new technology deployment; legal and regulatory issues; finance for incremental costs of advanced technology

Expert Panelists:

Dr George Marsh HEAD, CLEANER FOSSIL FUELS UNIT, DEPARTMENT OF TRADE AND INDUSTRY, UK

Speaker to be advised KOREAN CORPORATION

Barry Worthington EXECUTIVE DIRECTOR, UNITED STATES ENERGY ASSOCIATION

Jim Dooley CARBON MANAGEMENT SOLUTIONS, DIRECTOR, PRIVATE ENERGY SECTOR, CO-DIRECTOR, PUBLIC-PRIVATE PARTNERSHIPS, BATTELLE

12.30pm

Stand-up Buffet Lunch – Exhibition area

SESSION VII

1.30pm

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MOVING FORWARD

Session Co-Chairs:

Jacek Podanski ENERGY TECHNOLOGY COLLABORATION DIVISION, IEA AND

S. Balagurunathan EXECUTIVE DIRECTOR, RESEARCH & DEVELOPMENT BHEL, INDIA

Satisfying Environmental Criteria

David Hawkins DIRECTOR OF CLIMATE CENTRE, NATURAL RESOURCE DEFENSE COUNCIL, US

Role of Government

John Ryan DEPUTY SECRETARY, DEPARTMENT OF INDUSTRY, TOURISM AND RESOURCES, AUSTRALIA

Afternoon break – Exhibition area

3.30pm

CONFERENCE CONCLUSION

Co-Chairs:

Barbara McKee DIRECTOR, OFFICE OF COAL AND POWER IMPORT AND EXPORT, US DEPARTMENT OF ENERGY; AND CHAIR, IEA WORKING PARTY ON FOSSIL FUELS AND

Andy Lloyd MINING EXECUTIVE, ENERGY SERVICES, RIO TINTO LTD

Closing Addresses:

Key Enabling Actions

Vicki Bailey ASSISTANT SECRETARY FOR POLICY AND INTERNATIONAL AFFAIRS, US DEPARTMENT OF ENERGY

Summary

Ken Humphreys CARBON MANAGEMENT SOLUTIONS, DIRECTOR, PUBLIC-PRIVATE PARTNERSHIPS, CO-DIRECTOR, PRIVATE ENERGY SECTOR, BATTELLE

Conference Close

Andy Lloyd MINING EXECUTIVE, ENERGY SERVICES, RIO TINTO LTD AND

Barbara McKee DIRECTOR, OFFICE OF COAL AND POWER IMPORT AND EXPORT, US DEPARTMENT OF ENERGY; AND CHAIR, IEA WORKING PARTY ON FOSSIL FUELS

5.00pm

Conclusion of conference proceedings

5.00pm – 7.00pm

CLOSING COCKTAILS **Conrad Jupiters Convention Centre**

Visit the ZETs web site for program information, updates, news, useful links, and to ask a question: www.tmm.com.au/zets

REGISTRATION FEES

ZETS CONFERENCE (February 18 & 19):

COST: \$990.00 per person.

APEC TECHNICAL WORKSHOP (February 16)

COST: included in ZETs conference fee

ZETS TECHNICAL WORKSHOP (February 17)

COST: included in ZETs conference fee

The registration fee includes documentation, welcome reception, refreshments, lunches, and closing cocktails.

VENUE DETAILS**CONRAD JUPITERS CONVENTION CENTRE**

Broadbeach Island, Gold Coast Highway,
Broadbeach, Gold Coast, Queensland, Australia

www.conrad.com.au

Telephone: +61 7 5592 1133

Facsimile: +61 7 5592 8219

AIRPORT TRANSFERS: Conrad Jupiters is a 20-minute drive from the Gold Coast Airport at Coolangatta and a one-hour drive from Brisbane International Airport. Coach services operate from Brisbane and the Gold Coast Airports to the hotel. A train service is also available between Brisbane Airport and Nerang Railway Station (approx 9 kms from the hotel), with connecting bus and limousine services. Contact The Meetings Manager for further information.

ACCOMMODATION COST: The room rate is \$175 per room per night, including GST (excluding breakfast) for single, double or twin occupancy.

IMPORTANT! Please book early. Accommodation bookings received after Wednesday January 14 will be accepted based on availability.

EXHIBITION AND SPONSORSHIP

The Organising Committee encourages companies and stakeholders to take advantage of the opportunity to promote their products and services by exhibiting at this event.

COST: \$2,200 for a standard 3m x 3m x 2.4m high booth.

Exhibitors will set up on Tuesday, dismantling following the afternoon tea break on Thursday. Companies and stakeholders are also encouraged to offer their support to the event and the industry by considering the sponsorship options available.

For further details and a booking form call
The Meetings Manager on +612 9241 2955
or go to: www.tmm.com.au/zets

SOCIAL FUNCTIONS AND COSTS**WELCOME RECEPTION:**

Tuesday February 17, Conrad Jupiters

CLOSING COCKTAILS:

Thursday February 19, Conrad Jupiters

COST: All delegates are welcome to attend both functions free of charge.

CONFERENCE DINNER: Wednesday February 18, McLaren's Landing Island Homestead, South Stradbroke Island

COST: \$110.00 per person. Includes food, beverages and transport to and from the Island, and light entertainment

POST-CONFERENCE TOURS, FRIDAY FEBRUARY 20**1. BYRON BAY & RAINFOREST SECRETS FULL DAY TOUR**

COST: \$56.00 per person

Byron Bay is located on Australia's most easterly mainland point and is approximately two hours by coach from the Gold Coast. This full day tour includes a visit to Cape Byron Lighthouse, morning tea at 'Rainforest Secrets', a cruise on the Tweed River, and free time to stroll around Byron Bay. Departs 8.05am, Conrad Jupiters
Returns 4.30pm, Conrad Jupiters
Minimum number required: 30 people

2. GOLD COAST AND HINTERLAND FULL DAY TOUR

COST: \$72 per person

Experience the contrast of the Gold Coast's beautiful beaches and waterways with the breathtaking views and lush rainforests of the Gold Coast hinterlands. Beginning with a cruise on the Gold Coast broadwater, the tour then transfers to a coach traveling through the countryside to Mt Tambourine and the Gold Coast Hinterland. The tour includes lunch and refreshments, with a wine tasting option available (additional cost) during the visit to Cedar Creek Vineyard. Departing 10.30am, Conrad Jupiters
Returning 6.00pm, Conrad Jupiters
Minimum number required: 12 people

If minimum numbers are not reached the conference organisers reserve the right to cancel the tours.

WEATHER

Temperatures on the Gold Coast in February range from an average minimum of 20°C to an average maximum of 30°C, often with high humidity.

DRESS CODE

The dress code for the conference is smart casual. Gentlemen are not required to wear a jacket and tie. The meeting rooms are air conditioned and can be cool. However, the outside temperature can be very hot in February, and we recommend wearing lightweight clothing for all social functions.

INSURANCE

Registration fees do not include insurance of any kind. It is strongly recommended that all delegates take out their own travel and medical insurance prior to coming to the conference. The conference organisers will not take any responsibility for any participant failing to insure.

the meetings manager

2nd Floor, 81¹/₂ George Street, The Rocks Sydney,
NSW 2000 Australia Tel: +61 2 9241 2955
email: meetings@tmm.com.au website: www.tmm.com.au

CONRAD JUPITERS CONVENTION CENTRE
GOLD COAST, QUEENSLAND, AUSTRALIA

NAME		
POSITION		
ORGANISATION		
ADDRESS		
CITY	STATE	POSTCODE
COUNTRY		
TEL	FAX	
EMAIL		

**ALL FEES AND CHARGES ARE IN AUSTRALIAN DOLLARS AND INCLUDE GST.
PAYMENT MUST BE MADE IN ADVANCE. A TAX INVOICE WILL BE PROVIDED ON RECEIPT OF REGISTRATION.**

CONFERENCE REGISTRATION FEE:	\$990.00
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Please indicate if you are also attending the following

APEC Workshop (Monday February 16)

☐ Yes, I will be attending

IEA ZETs Technical Workshop (Tuesday February 17)

☐ Yes, I will be attending

CONFERENCE DINNER:	\$110.00
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☐ Yes, I will be attending the conference dinner. My payment of \$110.00 per person is included below

ACCOMMODATION: \$175.00

Conrad Jupiters, standard room per night

PLEASE NOTE: A deposit of \$175.00 must be included to secure your accommodation.

Please reserve accommodation ☐ Double ☐ Single ☐ Twin ☐ Non-smoking preferred

Arrival date	/	Departure date	/
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POST CONFERENCE TOURS:

Please book me on the following tour. My payment is included below.

TOUR 1 Byron Bay & Rainforest Secrets, Full Day Tour

COST per person: **\$56.00**

TOUR 2 Gold Coast and Hinterland, Full Day Tour

COST per person: **\$72.00**

SPONSORSHIP & EXHIBITION: ☐ Yes, I am interested in sponsoring and/or exhibiting. Please contact me.

PAYMENT DETAILS:

☐ A cheque payable to *The Meetings Manager Pty Ltd* is enclosed

☐ Please charge the following credit card ☐ Mastercard ☐ Visa ☐ Amex

Card number

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 Expiry date / /

Signature _____ Cardholder name _____

CREDIT CARD PAYMENT NOT VALID WITHOUT SIGNATURE

(PLEASE PRINT)

CANCELLATIONS: If you are unable to attend, a substitute delegate is welcome at no extra charge. Where no substitute is available, a fee of \$165 (incl GST) will be deducted from your registration fee for cancellations received by The Meetings Manager in writing at least 14 days prior to the event. A 50% refund, plus conference documentation, will be given if cancellations are received in writing between 14 and 7 days prior to the event. Thereafter no refunds will be made, but conference documentation will be sent by mail following the event. All changes must be advised in writing to The Meetings Manager.

OUR PRIVACY POLICY: The conference organisers and their agents advise that personal information will be used for no purpose other than in the organisation of this conference.

Registration fee	\$
Conference dinner	\$
Accommodation deposit	\$
Post-conference tour	\$
TOTAL PAID	\$

Please complete the form and fax to +61 2 9241 5354

or mail to The Meetings Manager Pty Ltd, PO Box N542, Grosvenor Place, NSW 1220 Australia
ABN 81 065 936 192